COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. VA0091511

Effective Date:	May 8, 2012
Expiration Date:	April 30, 2017

AUTHORIZATION TO DISCHARGE UNDER THE

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

AND

THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, and Parts I and II of this permit as set forth herein.

Owner:	Rappahannock Westminster-Canterbury, Inc.
Facility Name:	Rappahannock Westminster-Canterbury WWTF
County:	Lancaster
Facility Location:	132 Lancaster Drive, Irvington, Virginia 22480

The owner is authorized to discharge to the following receiving stream:

Stream:	Old Mill Cove, UT
River Basin:	Rappahannock River
River Subbasin:	N/A
Section:	2
Class:	III
Special Standards:	None

Water Permit Manager, Piedmont Regional Office

May 8, 2012
Date

A. Wastewater Storage Management and Monitoring Requirements

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage pollutants at its wastewater treatment and storage facility and the land application site listed in Part I.F.1.

2. The following pollutants shall be limited and monitored as specified below:

INFLUENT MONITORING

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Influent Flow (Average) [(a)]	NL	MGD	Continuous	Measured
Influent Flow (Total Monthly)	NL	MG	Continuous	Measured
Volume in Storage	NL	MG	1 per Month	Calculated
Remaining Storage Capacity	NL	MG	1 per Month	Calculated
Holding Pond Freeboard [(b)]	2.0 (minimum)	feet	1 per Day	Measured

"MGD" means million gallons per day. "NL" means no limitation is established; however, monitoring and reporting are required.

(a) The design flow of this treatment facility is 0.050 MGD.
(b) Should 2.0 feet of freeboard not be maintained in any of the wastewater storage facilities, the permittee shall immediately (within 24 hours) notify the DEQ Piedmont Regional Office and describe the problem(s) and the measure(s) taken to correct the problem(s). Within five days of the notification, the permittee shall submit a written statement of explanation and corrective measures taken.

3. Measurements taken to comply with the influent monitoring requirements specified above shall be performed at the flow meter located at the head of the treatment facility. Sampling shall be performed as outlined in the O&M Manual.

4. Data shall be submitted as part of the monthly Monitoring Report due at the DEQ Piedmont Regional Office by the 10th of each month using Attachment A.1. See Part I.F.11 for additional reporting requirements.

B. Wastewater Management and Monitoring Requirements

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage pollutants at its wastewater treatment and storage facility and the land application site listed in Part I.F.1.

2. The following pollutants shall be limited and monitored as specified below:

EFFLUENT MONITORING

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Volume Applied from Storage	NL	MG	Continuous	Recorded
Irrigation Rate	0.25 (maximum)	inches/hour	1 per Day	Calculated
	1.0 (maximum)	inches/day	1 per Day	Calculated
	2.0 (maximum)	inches/week	1 per Day	Calculated
Volume Applied to Each Zone	NL	MG	1 per Day	Calculated
pH [(a)]	6.0 (minimum)	standard units	1 per Day	Grab
	9.0 (maximum)	standard units	1 per Day	Grab
Total Residual Chlorine (TRC) [(b)]	2.0 (minimum)	mg/L	1 per Day	Grab
Fecal Coliform	23 (maximum)	CFU/100 mL	1 per Week	Grab
Plant Available Nitrogen (PAN) [(c)] Applied to Each Zone	NL	pounds/acre	1 per Month	Calculated
Plant Available Nitrogen (PAN) [(c)] Applied to Each Zone, Year-to-Date	NL	pounds/acre	1 per Month	Calculated
Phosphate (P_2O_5) Applied to [(c)] Each Zone	NL	pounds/acre	1 per Month	Calculated
Phosphate (P_2O_5) Applied to [(c)] Each Zone, Year-to-Date	NL	pounds/acre	1 per Month	Calculated
Potash (K_2O) Applied to [(c)] Each Zone	NL	pounds/acre	1 per Month	Calculated
Potash (K_2O) Applied to [(c)] Each Zone, Year-to-Date	NL	pounds/acre	1 per Month	Calculated
Ammonia Nitrogen [(c)]	NL	mg/L	1 per Month	Composite [(f)]
Nitrate Nitrogen [(c)]	NL	mg/L	1 per Month	Composite [(f)]
Total Kjeldahl Nitrogen (TKN) [(c)]	NL	mg/L	1 per Month	Composite [(f)]

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
BOD_5 [(d)]	48 (maximum)	mg/L	1 per Month	Composite [(f)]
Total Suspended Solids (TSS) [(d) (g)]	60 (maximum)	mg/L	1 per Month	Composite [(f)]
Total Phosphorus [(c)]	NL	mg/L	1 per Month	Composite [(f)]
Total Potassium [(c)]	NL	mg/L	1 per Month	Composite [(f)]
Total Recoverable Cadmium	NL	µg/L	1 per 5 Years [(e)]	Composite [(f)]
Total Recoverable Copper	NL	µg/L	1 per 5 Years [(e)]	Composite [(f)]
Total Recoverable Lead	NL	µg/L	1 per 5 Years [(e)]	Composite [(f)]
Total Recoverable Nickel	NL	µg/L	1 per 5 Years [(e)]	Composite [(f)]
Total Recoverable Zinc	NL	µg/L	1 per 5 Years [(e)]	Composite [(f)]

"mg/L" means milligrams per liter. "µg/L" means micrograms per liter. "NL" means no limitation is established; however, monitoring and reporting are required.

(a) The effluent shall have a pH value between 6.0 and 9.0 standard units at all times and shall be monitored by grab sample each day that effluent is land applied.

(b) The effluent shall have a minimum chlorine residual of 2.0 mg/L at all times and shall be monitored by grab sample at the exit of the chlorine contact tank each day that effluent is land applied.

(c) Appropriate records shall be maintained by the permittee for the site regarding plant available nitrogen (PAN), phosphate, and potash loadings from manure, chemical fertilizers, and land applied wastewater. PAN, phosphate, and potash loading rates shall be in accordance with the most current DCR-approved Nutrient Management Plan for the land application site. See Part I.F.23 for nutrient conversion calculations. The land application site shall be maintained in fescue grass or a similar cover crop (a mixture of Red Top, Tall Fescue, and Reed Canary Grass was approved in September 1997).

(d) BOD_5 and TSS samples shall be taken prior to storage (i.e. prior to effluent entering Cell 3 and/or 4).

(e) Sampling to be initiated at a frequency of "1 per 5 years" shall begin no earlier than 4 years from the effective date of the permit. Sampling results collected once per 5 years shall be submitted as part of the monthly Monitoring Report following the month in which the sample was taken.

(f) A representative composite shall be comprised of at least four (4) volume average or weight average grab samples composited over a daily operating period. Sampling shall be performed as described in the O&M Manual.

(g) These limitations are expressed in two (2) significant figures.

3. Samples collected to comply with the effluent monitoring requirements specified above shall be taken following chlorination and prior to land application, except as noted above. Continuous readings and daily, weekly, and monthly samples shall be taken as directed.

4. Data shall be submitted as part of the monthly Monitoring Report due at the DEQ Piedmont Regional Office by the 10th of each month using Attachments A.2 and A.3. See Part I.F.11 for additional reporting requirements.

C. Soil Management and Monitoring Requirements

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage pollutants at its wastewater treatment and storage facility and the land application site listed in Part I.F.1.

2. The following pollutants shall be limited and monitored as specified below:

SOIL MONITORING

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Available Phosphorus	NL	ppm	1 per Year	Composite (c)
Cation Exchange Capacity (CEC)	NL	meq/100 g	1 per Year	Composite (c)
Exchangeable Potassium	NL	ppm	1 per Year	Composite (c)
Soil Organic Matter	NL	% (percent)	1 per Year	Composite (c)
Soil pH	NL	standard units	1 per Year	Composite (c)
Organic Nitrogen	NL	ppm	1 per Year	Composite (c)
Ammonia Nitrogen	NL	ppm	1 per Year	Composite (c)
Nitrate Nitrogen	NL	ppm	1 per Year	Composite (c)
Hydraulic Conductivity (a)	NL	inches/hour	1 per 5 Years	In situ
Particle Size Analysis or (b) USDA Textural Estimate	NL	% (percent)	1 per 5 Years	Composite (c)

"ppm" means parts per million. "meq/100 g" means milliequivalents per 100 grams. "NL" means no limitation is established; however, monitoring and reporting are required.

(a) The hydraulic conductivity analysis shall be performed on the most restrictive subsoil layer and should begin no earlier than 4 years from the effective date of the permit.

(b) The particle size analysis shall be performed on the most restrictive subsoil horizon and should begin no earlier than 4 years from the effective date of this permit.

(c) Soil composite samples shall be representative of the soil types delineated by the Natural Resource Conservation Service soil survey or equivalent. Samples shall be taken at the zero (0) to four (4) inch depth for each land application site that has not been tilled within the past three (3) years. Samples shall be taken at the zero (0) to six (6) inch depth for each land application site that is tilled or has been tilled within the past three (3) years. Sampling shall be performed as outlined in the O&M Manual.

3. Samples collected to comply with the "1 per Year" soil monitoring requirements specified above shall be taken in April of each year, and the results submitted as part of the monthly Monitoring Report due at the DEQ Piedmont Regional Office by July 10th using Attachment A.4. Sampling to comply with the "1 per 5 Years" soil monitoring requirements specified above shall begin no earlier than 4 years from the effective date of the permit, and the results submitted as part of the monthly Monitoring Report due no later than July 10th following the date the sample was taken. See Part I.F.11 for additional reporting requirements.

D. Ground Water Management and Monitoring Requirements

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage pollutants at its wastewater treatment and storage facility and the land application site listed in Part I.F.1.

2. The following pollutants shall be limited and monitored as specified below:

GROUND WATER MONITORING – LAND APPLICATION SITE

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Static Water Level	NL	0.01 feet	1 per 3 Months [(a)]	Measure
Chloride	NL	mg/L	1 per 3 Months [(a)]	Grab
Conductivity	NL	µmhos/cm	1 per 3 Months [(a)]	Grab
Nitrate Nitrogen	NL	mg/L	1 per 3 Months [(a)]	Grab
pH	NL	standard units	1 per 3 Months [(a)]	Grab
Total Recoverable Sodium	NL	mg/L	1 per 3 Months [(a)]	Grab
Total Organic Carbon	NL	mg/L	1 per Year [(b)]	Grab
Total Phosphorus	NL	mg/L	1 per Year [(b)]	Grab

"mg/L" means milligrams per liter. "NL" means no limitation is established; however, monitoring and reporting are required.

(a) "1 per 3 Months" means one sample taken every three months, in accordance with the following schedule: 1st Quarter (January 1 – March 31, to be submitted as part of the monthly Monitoring Report due no later than April 10th); 2nd Quarter (April 1 – June 30, to be submitted as part of the monthly Monitoring Report due no later than July 10th); 3rd Quarter (July 1 – September 30, to be submitted as part of the monthly Monitoring Report due no later than October 10th); 4th Quarter (October 1 – December 31, to be submitted as part of the monthly Monitoring Report due no later than January 10th).

(b) "1 per Year" means one sample taken every April, to be submitted as part of the monthly Monitoring Report due no later than July 10th.

3. At least three (3) well volumes of ground water shall be purged from each monitoring well prior to sampling. Monitoring well static water level shall be measured prior to purging. Sampling shall be performed as outlined in the O&M Manual.

4. Samples collected to comply with the ground water monitoring requirements specified above shall be taken at monitoring wells MW 1, MW 2, and MW 3. Results shall be submitted to the DEQ Piedmont Regional Office using Attachment A.5. See Part I.F.11 for additional reporting requirements.

E. Ground Water Management and Monitoring Requirements

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage pollutants at its wastewater treatment and storage facility and the land application site listed in Part I.F.1.

2. The following pollutants shall be limited and monitored as specified below:

GROUND WATER MONITORING – LAGOON TREATMENT WORKS

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Static Water Level	NL	0.01 feet	1 per 3 Months [(a)]	Measure
Chloride	NL	mg/L	1 per 3 Months [(a)]	Grab
Conductivity	NL	µmhos/cm	1 per 3 Months [(a)]	Grab
Nitrate Nitrogen	NL	mg/L	1 per 3 Months [(a)]	Grab
pH	NL	standard units	1 per 3 Months [(a)]	Grab
Total Organic Carbon	NL	mg/L	1 per 3 Months [(a)]	Grab
Total Recoverable Sodium	NL	mg/L	1 per 3 Months [(a)]	Grab
Total Phosphorus	NL	mg/L	1 per Year [(b)]	Grab

"mg/L" means milligrams per liter. "NL" means no limitation is established; however, monitoring and reporting are required.

(a) "1 per 3 Months" means one sample taken every three months, in accordance with the following schedule: 1st Quarter (January 1 – March 31, to be submitted as part of the monthly Monitoring Report due no later than April 10th); 2nd Quarter (April 1 – June 30, to be submitted as part of the monthly Monitoring Report due no later than July 10th); 3rd Quarter (July 1 – September 30, to be submitted as part of the monthly Monitoring Report due no later than October 10th); 4th Quarter (October 1 – December 31, to be submitted as part of the monthly Monitoring Report due no later than January 10th).

(b) "1 per Year" means one sample taken every April, to be submitted as part of the monthly Monitoring Report due no later than July 10th.

3. At least three (3) well volumes of ground water shall be purged from each monitoring well prior to sampling. Monitoring well static water level shall be measured prior to purging. Sampling shall be performed as outlined in the O&M Manual.

4. Samples collected to comply with the ground water monitoring requirements specified above shall be taken at monitoring wells MW 4, MW 5, MW 6, MW 7, MW 8, MW 9, and MW 10. Results shall be submitted to the DEQ Piedmont Regional Office using Attachment A.6. See Part I.F.11 for additional reporting requirements.

F. Other Requirements and Special Conditions

1. **Land Application Site Specification**
Wastewater shall be applied only at the sites identified below:

Owner:	Rappahannock Westminster-Canterbury, Inc.
Owner Address:	132 Lancaster Drive, Irvington, Virginia 22480
County:	Lancaster County
Location:	132 Lancaster Drive, Irvington, Virginia 22480
Site:	One (1) land application site consisting of 7 zones [(a)]
Net Acreage:	14.5 acres [(a)]

(a) A map detailing the location of the land application site is included in the 2011 permit reissuance application.

2. **Storm Water Discharge Exception**
All pollutant management activities covered under this permit shall maintain no point source discharge of pollutants to surface waters except in the case of a storm event greater than the 25-year, 24-hour storm. The operation of the facilities of the owner permitted herein shall not contravene the Water Quality Standards, as adopted and amended by the Board, or any provision of the Water Control Law.

3. **Materials Handling/Storage**
Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner and consistent with Best Management Practices so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.

4. **Operation and Maintenance Manual Requirement**
The permittee shall review the existing Operations and Maintenance (O&M) Manual and notify the DEQ Piedmont Regional Office in writing within 90 days of the effective date of this permit whether it is still accurate and complete. If the O&M Manual is no longer accurate and complete, a revised O&M Manual shall be submitted for approval to the DEQ Piedmont Regional Office within 90 days of the effective date of this permit. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works in accordance with the approved O&M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent and sludge samples;
b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters;
e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping; and,
f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Piedmont Regional Office staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O&M Manual shall be deemed a violation of the permit.

5. **Ground Water Mixing Zone**

A ground water mixing zone has been established downgradient of the land application site in accordance with the Virginia Ground Water Standards, 9VAC25-280-10 et seq. The mixing zone extends to the downgradient property boundary and to a depth of 23 feet above mean sea level (MSL). Ground water standards shall be maintained outside of the mixing zone.

6. **Ground Water Monitoring**

The permittee shall continue sampling and reporting in accordance with the amended ground water monitoring plan approved on **December 11, 2008**. The purpose of this plan is to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. The approved plan is an enforceable part of the permit. Any changes to the plan must be submitted for written approval to the DEQ Piedmont Regional Office.

Evaluation of previously submitted ground water monitoring results indicates that activities at the site may have contaminated the ground water. The permittee shall submit an approvable revised ground water monitoring plan within 90 days of the effective date of this permit. The revised plan shall set forth the steps to be taken by the permittee to determine the magnitude and location of the contaminant plume and if it extends beyond the permittee's property boundary. Once approved, the revised plan shall be incorporated into the permit by reference and become an enforceable part of this permit.

Based on the extent of the contamination, a corrective action plan and/or risk analysis may be required. The permittee shall submit an approvable corrective action plan and/or risk analysis within 60 days of being notified in writing by the DEQ Piedmont Regional Office. The corrective action plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property. Once approved, the corrective action plan and/or risk analysis shall be incorporated into the permit by reference and become an enforceable part of this permit.

7. **Licensed Operator Requirement**

The permittee shall employ or contract at least one Class III licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

8. **Operational Requirements**

For all land treatment of wastewater, the following shall be required:

a. There shall be no application of wastewater to the ground when it is saturated, frozen or covered with ice or snow, and during periods of rainfall.
b. The chosen method of wastewater application shall minimize human contact with the wastewater.
c. Wastewater shall be prevented from coming into contact with drinking fountains, water coolers, or eating surfaces.
d. Application or irrigation systems used for land treatment shall be designed, installed and adjusted to:
    1. Provide uniform distribution of wastewater over the land treatment site,

2. Prevent ponding or pooling of wastewater at the land treatment site,
3. Facilitate maintenance and harvesting of the land treatment site and precludes damage to the application or irrigation system from the use of maintenance or harvesting equipment.
4. Prevent aerosol carry-over from the land treatment site to areas beyond the setback distances described in Part I.F.13.
5. Prevent clogging from algae or suspended solids.

e. Maximum application rates in terms of depth of effluent applied to the site shall not exceed 0.25 inch per hour, 1.0 inch per day, and 2.0 inches per week.

f. Any wastewater runoff shall be confined to the land application site.

9. **95% Capacity Reopener**

A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to DEQ Piedmont Regional Office when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ Piedmont regional Office no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

10. **Reliability Class**

The permitted treatment works shall meet Reliability Class I.

11. **Summary Report**

A summary report covering the previous reporting period's activities shall be submitted to the DEQ Piedmont Regional Office by the 10th of the following month. Reports shall include:

a. A summary of the quantities of sewage sludge stored in or withdrawn from storage facilities.

b. A summary of staff gauge readings demonstrating freeboard maintenance.

c. A summary of spray head utilization demonstrating compliance with the hydraulic loading schedule of the O&M Manual.

12. **Annual Project Summary Report**

An annual project summary report shall be prepared and submitted to the DEQ Piedmont Regional Office by February 10th of each year and shall include the following:

a. The yearly water balance showing inputs to and drawdown from storage facilities.

b. Land application site information describing the wastewater applied to each field during the previous year with the annual and cumulative loading limiting constituents specified in Part I.B of the permit, and the remaining site life for each field.

c. A summary of the agronomic practices which occurred during the preceding growing season, including but not limited to, the timing and number of crop cuttings, and an estimate of total crop yield (bushel/acre or tons/acre) removed from each field; any lime, fertilizer or soil amendment applications made to a field other than that in the wastewater applied to the same field (describe type and quantities); and reseeding.

13. **Buffer Zones**

The following minimum buffer zones with not less than 60% vegetative cover of the soil surface shall be maintained from the site of wastewater application to the features notes below:

Buffered Feature	Minimum Distance (feet)
Drinking water supply wells or springs	100

Buffered Feature	Minimum Distance (feet)
Occupied dwellings	100
Property lines	50
Surface water courses (including dry ditches)	50
All improved roadways	25
Rock outcrops (with the exception of limestone outcrops)	25
Limestone outcrops	50
Agricultural drainage ditches whose primary purpose is to lower the seasonal high water table and where slopes are less than 2%	50
Sinkholes	(a)

(a) Wastewater shall not be applied in such a manner that it would discharge to sinkholes that may exist in the area.

14. **Wind Restriction**
Land application of wastewaters or highly liquid sludges shall not occur during winds of sufficient strength to cause overspray or drifting of aerosols into or beyond the buffer zones identified in Part I.F.13.

15. **Nutrient Management Plan**
The amount of nutrients applied to the wastewater land application sites shall be in accordance with the Nutrient Management Plan (NMP) submitted with the permit application for the sites. A minimum of once per three years, the permittee shall re-evaluate and, as necessary, revise the NMP to ensure that the NMP is current. Virginia Department of Conservation and Recreation (DCR) approved revisions to the NMP shall be submitted to the DEQ Piedmont Regional Office prior to use of application sites affected by the revisions.

16. **Wastewater Land Application**
Wastewater land application shall be controlled by the nutrient management plan for the fields to receive wastewater.

17. **Plant Available Nitrogen (PAN) Loading Rate**
The application of wastewater together with any other source of PAN shall not exceed the agronomic loading rate for the crops grown on each site. Calculation of PAN in the wastewater shall be based on analytical results from wastewater samples collected during the most recent 12 months. The wastewater application rates shall be that specified in the nutrient management plan for the application site. The resulting wastewater application rates shall be included in the 10th-of-the-month reports sent to the DEQ Piedmont Regional Office.

18. **Freeboard**
All wastewater storage facilities shall maintain two (2) feet of freeboard at all times, up to and including a 25-year, 24-hour storm.

19. **Indirect Dischargers**
The permittee shall provide adequate notice to the DEQ Piedmont Regional Office of the following:

a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of the Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

20. **CTC, CTO Requirement**

The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ Office of Wastewater Engineering (for Water Quality Improvement Funded (WQIF) projects) or submitted by the design engineer and owner to the DEQ regional water permit manager (for non WQIF projects) prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

21. **Closure Plan**

If the permittee plans an expansion or upgrade to replace the existing treatment works, or if facilities are permanently closed, the permittee shall submit to the DEQ Piedmont Regional Office a closure plan for the existing treatment works. The plan shall address the following information as a minimum: Verification of elimination of sources and/or alternate treatment scheme; treatment, removal and final disposition of residual wastewater and solids; removal/demolition/disposal of structures, equipment, piping and appurtenances; site grading, and erosion and sediment control; restoration of site vegetation; access control; fill materials; and proposed land use (post-closure) of the site. The plan should contain proposed dates for beginning and completion of the work. The plan must be approved by the DEQ prior to implementation.

22. **Compliance Reporting**

a. The quantification levels (QL) shall be less than or equal to the following concentrations:

Effluent Parameter	Quantification Level
BOD_5	2 mg/L
Total Suspended Solids	1.0 mg/L
Total Residual Chlorine	0.10 mg/L

The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained. The permittee shall use any method in accordance with Part II.A of this permit.

b. Single Datum **–** Any single datum required shall be reported as "<QL" if it is less than the QL used for the analysis (QL must be less than or equal to the QL listed in a. above). Otherwise the numerical value shall be reported.

c. Significant Digits – The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used by the permittee (i.e., 5 always rounding up or to the nearest even number), the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

23. **Nutrient Conversion Calculations**

Plant Available Nitrogen (PAN), Phosphate (P_2O_5), and Potash (K_2O) effluent concentrations shall be calculated and reported on Attachment A.3 in accordance with the following formulae:

$PAN = NO_3 + [\ 0.5 \times TAN\ ] + [\ 0.5 \times (\ TKN - TAN\ )\ ]$

where:
PAN = plant available nitrogen effluent concentration (mg/L)
NO_3 = nitrate nitrogen effluent concentration (mg/L) as reported on Attachment A.2
TKN = total kjeldahl nitrogen effluent concentration (mg/L) as reported on Attachment A.2
TAN = total ammonia nitrogen effluent concentration (mg/L) as reported on Attachment A.2

$P_2O_5 = 2.27 \times TP$

where:
P_2O_5 = phosphate effluent concentration (mg/L)
TP = total phosphorus effluent concentration (mg/L) as reported on Attachment A.2

$K_2O = 1.2 \times K$

where:
K_2O = potash effluent concentration (mg/L)
K = total potassium effluent concentration (mg/L) as reported on Attachment A.2

24. **Cation Imbalance Plan**

The permittee shall submit to the DEQ Piedmont Regional Office an approvable cation imbalance plan and implementation schedule no later than 90 days following the effective date of this permit. The plan shall set forth the steps to be taken by the permittee to correct potential cation imbalances resulting from the land application activities performed on-site. Once approved, the cation imbalance plan shall be incorporated into the O&M Manual and become an enforceable part of this permit.

25. **Sludge Reopener**

The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

4. Samples taken as required by this permit shall be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

B. Records

1. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

   DEQ - Piedmont Regional Office
   4949-A Cox Road
   Glen Allen, VA 23060

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or

2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F, shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;

2. The cause of the discharge;

3. The date on which the discharge occurred;

4. The length of time that the discharge continued;

5. The volume of the discharge;

6. If the discharge is continuing, how long it is expected to continue;

7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit. Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;

2. Breakdown of processing or accessory equipment;

3. Failure or taking out of service some or all of the treatment works; and

4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:
   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Parts II G, H and I may be made to the Department's Regional Office at (804) 527-5020 or fax (804) 527-5106. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24 hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
   a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
      (1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
      (2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part II K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new

authorization satisfying the requirements of Part II K 2 shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U), and "upset" (Part II V) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant

performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II U 2 and U 3.

2. Notice
   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.
   a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
      (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      (3) The permittee submitted notices as required under Part II U 2.

   b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;
c. The permittee submitted notice of the upset as required in Part II I; and
d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:
   a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;

   b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

   c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Attachment A
VPDES Monitoring Report
Certification

Rappahannock Westminster-Canterbury
Permit No. VA0091511
Month _____ 20____
Report Date _____ 20____

I hereby certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The following attachments are included with this submittal:

( ) Attachment A.1 – Influent Monitoring Report (Monthly)
(A daily operational log and any contractual lab certification sheets are required as an addendum to this report.)

( ) Attachment A.2 – Effluent Monitoring Report
- ( ) 1 per Month Parameters (Monthly)
- ( ) 1 per 5 Years Parameters (1 per 5 Years)

( ) Attachment A.3 – Land Application Report (Monthly)

( ) Attachment A.4 – Soil Monitoring Report
- ( ) 1 per Year Parameters (Annually)
- ( ) 1 per 5 Years Parameters (1 per 5 Years)

( ) Attachment A.5 – Ground Water Monitoring Report (Land Application Site)
- ( ) 1 per 3 Months Parameters (1 per 3 Months)
- ( ) 1 per Year Parameters (Annually)

( ) Attachment A.6 – Ground Water Monitoring Report (Lagoon Treatment Works)
- ( ) 1 per 3 Months Parameters (1 per 3 Months)
- ( ) 1 per Year Parameters (Annually)

( ) Other _____
_____

Rappahannock Westminster-Canterbury WWTF
132 Lancaster Drive
Irvington, Virginia 22480

_____ _____
Printed Name Signature

_____ _____
Title Date

Parameter	Influent Flow (Average)	Influent Flow (Total Monthly)	Volume in Storage	Remaining Storage Capacity	Holding Pond Freeboard (minimum)			
Limits	NL	NL	NL	NL	2.0			
Units	MGD	MG	MG	MG	feet			
Frequency	Continuous	Continuous	1 per Month	1 per Month	1 per Day			
Sample Type	Measured	Measured	Calculated	Calculated	Measured			
Required Reporting	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month			
Storage Cell	********	********	3 and 4	3 and 4	1	2	3	4
Result								

Parameter	Volume Applied From Storage	Irrigation Rate (maximum)	Irrigation Rate (maximum)	Irrigation Rate (maximum)	pH (minimum)	pH (maximum)	TRC (minimum)
Limits	NL	0.25	1.0	2.0	6.0	9.0	2.0
Units	MG	inches/hour	inches/day	inches/week	standard units	standard units	mg/L
Frequency	Continuous	1 per Day	1 per Day	1 per Day	1 per Day	1 per Day	1 per Day
Sample Type	Recorded	Calculated	Calculated	Calculated	Grab	Grab	Grab
Required Reporting	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month
Result							

Parameter	Fecal Coliform (maximum)	Ammonia Nitrogen	Nitrate Nitrogen	Total Kjeldahl Nitrogen	BOD_5 (maximum)	TSS (maximum)	Total Phosphorus
Limits	23	NL	NL	NL	48	60	NL
Units	CFU/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Frequency	1 per Week	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month
Sample Type	Grab	Composite	Composite	Composite	Composite	Composite	Composite
Required Reporting	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month
Result							

Parameter	Total Potassium	Total Recoverable Cadmium	Total Recoverable Copper	Total Recoverable Lead	Total Recoverable Nickel	Total Recoverable Zinc
Limits	NL	NL	NL	NL	NL	NL
Units	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Frequency	1 per Month	1 per 5 Years	1 per 5 Years	1 per 5 Years	1 per 5 Years	1 per 5 Years
Sample Type	Composite	Composite	Composite	Composite	Composite	Composite
Required Reporting	1 per Month	1 per 5 Years	1 per 5 Years	1 per 5 Years	1 per 5 Years	1 per 5 Years
Result						

Parameter	Zone Size	Volume Applied to Each Zone	PAN Applied to Each Zone	PAN Applied to Each Zone Year-to-Date	P_2O_5 Applied to Each Zone	P_2O_5 Applied to Each Zone Year-to-Date
Limits	********	NL	NL	NL	NL	NL
Units	acres	MG	pounds/acre	pounds/acre	pounds/acre	pounds/acre
Frequency	********	1 per Day	1 per Month	1 per Month	1 per Month	1 per Month
Sample Type	********	Calculated	Calculated	Calculated	Calculated	Calculated
Required Reporting	********	1 per Month	1 per Month	1 per Month	1 per Month	1 per Month
Zone Number	********	********	********	********	********	********
1						
2						
3						
4						
5						
6						
7						

Parameter	K_2O Applied to Each Zone	K_2O Applied to Each Zone Year-to-Date
Limits	NL	NL
Units	pounds/acre	pounds/acre
Frequency	1 per Month	1 per Month
Sample Type	Calculated	Calculated
Required Reporting	1 per Month	1 per Month
Zone Number	********	********
1		
2		
3		
4		
5		
6		
7		

Parameter	Available Phosphorus	Cation Exchange Capacity	Exchangeable Potassium	Soil Organic Matter	Soil pH	Organic Nitrogen	Ammonia Nitrogen
Limits	NL	NL	NL	NL	NL	NL	NL
Units	ppm	meq/100 g	ppm	% (percent)	standard units	ppm	ppm
Frequency	1 per Year	1 per Year	1 per Year	1 per Year	1 per Year	1 per Year	1 per Year
Sample Type	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Required Reporting	1 per Year	1 per Year	1 per Year	1 per Year	1 per Year	1 per Year	1 per Year
Sample Month	April	April	April	April	April	April	April
Sample Date							
Result							

Parameter	Nitrate Nitrogen	Hydraulic Conductivity	Particle Size Analysis or USDA Textural Estimate
Limits	NL	NL	NL
Units	ppm	inches/hour	% (percent)
Frequency	1 per Year	1 per 5 Years	1 per 5 Years
Sample Type	Composite	In situ	Composite
Required Reporting	1 per Year	1 per 5 Years	1 per 5 Years
Sample Month	April		
Sample Date			
Result			

Parameter	Static Water Level	Chloride	Conductivity	Nitrate Nitrogen	pH	Total Recoverable Sodium
Limits	NL	NL	NL	NL	NL	NL
Units	0.01 feet	mg/L	µmhos/cm	mg/L	standard units	mg/L
Frequency	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab
Required Reporting	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months
Sample Month						
Sample Date						
Result						

Parameter	Total Organic Carbon	Total Phosphorus
Limits	NL	NL
Units	mg/L	mg/L
Frequency	1 per Year	1 per Year
Sample Type	Grab	Grab
Required Reporting	1 per Year	1 per Year
Sample Month	April	April
Sample Date		
Result		

Parameter	Static Water Level	Chloride	Conductivity	Nitrate Nitrogen	pH	Total Organic Carbon	Total Recoverable Sodium
Limits	NL	NL	NL	NL	NL	NL	NL
Units	0.01 feet	mg/L	µmhos/cm	mg/L	standard units	mg/L	mg/L
Frequency	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Required Reporting	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months	1 per 3 Months
Sample Month							
Sample Date							
Result							

Parameter	Total Phosphorus
Limits	NL
Units	mg/L
Frequency	1 per Year
Sample Type	Grab
Required Reporting	1 per Year
Sample Month	April
Sample Date	
Result	